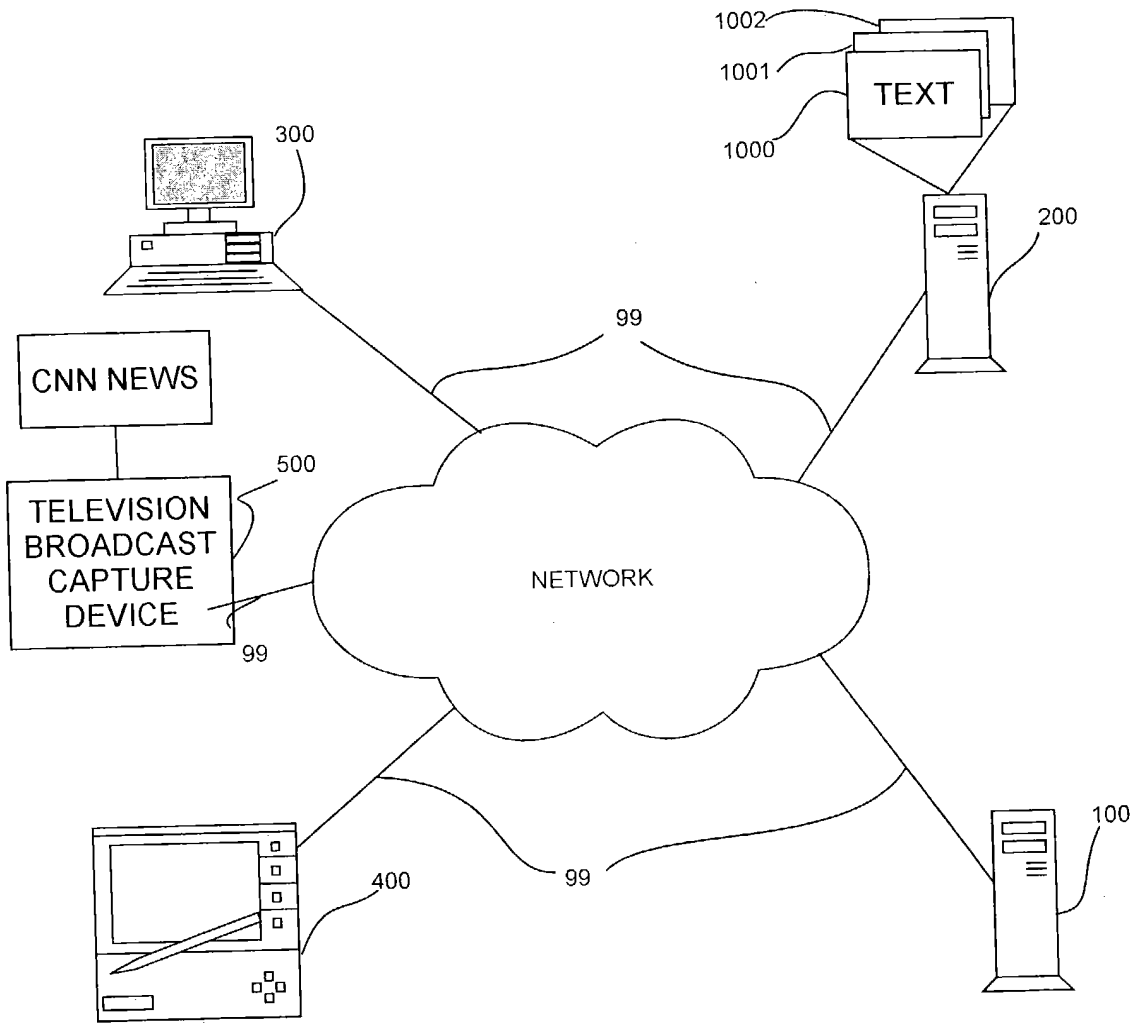
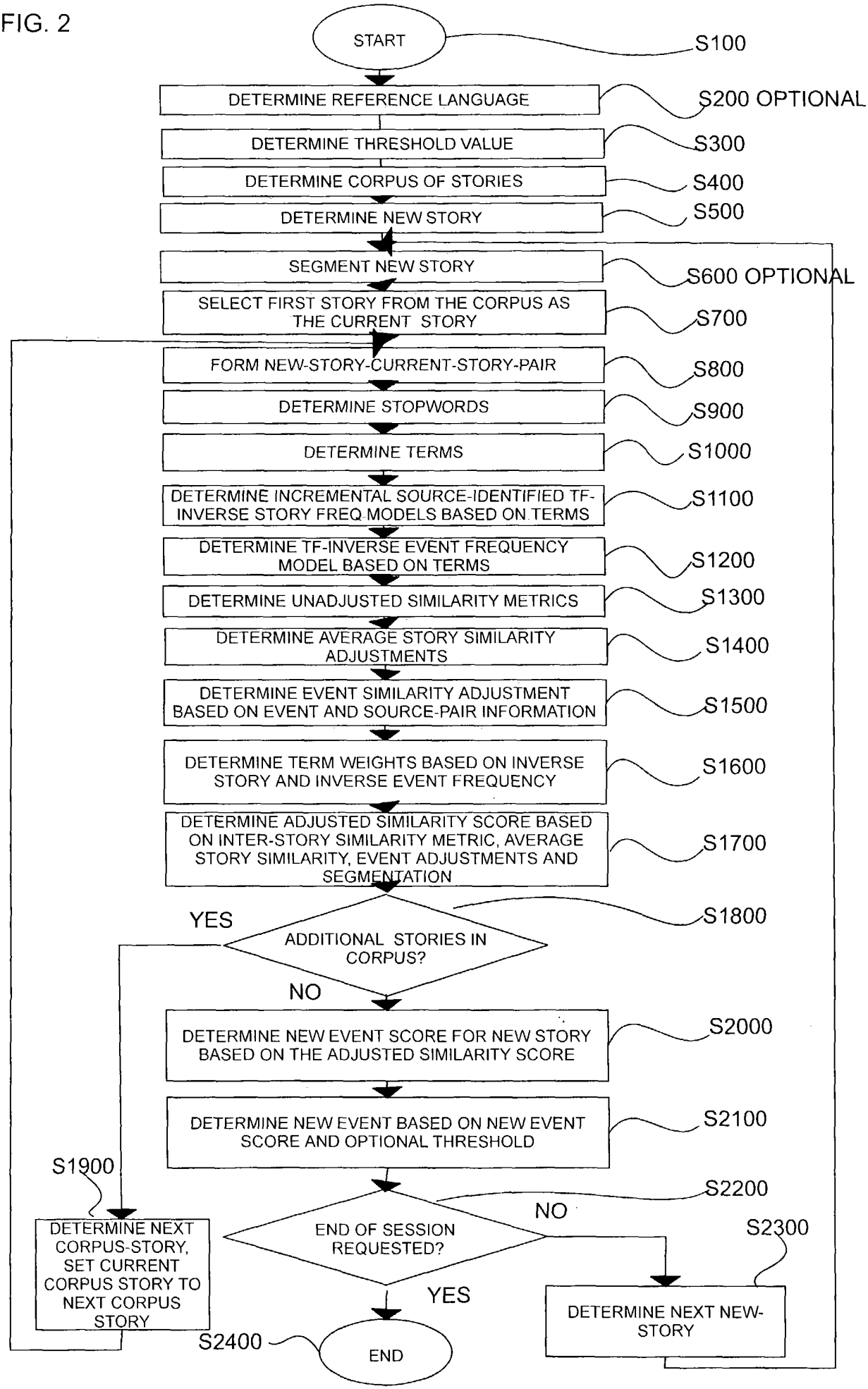

1002
1001
1000
TEXT
300
200
99
CNN NEWS
500
TELEVISION BROADCAST CAPTURE DEVICE
99
NETWORK
99
400
100

FIG. 1

FIG. 2


START
S100
DETERMINE REFERENCE LANGUAGE
S200 OPTIONAL
DETERMINE THRESHOLD VALUE
S300
DETERMINE CORPUS OF STORIES
S400
DETERMINE NEW STORY
S500
SEGMENT NEW STORY
S600 OPTIONAL
SELECT FIRST STORY FROM THE CORPUS AS THE CURRENT STORY
S700
FORM NEW-STORY-CURRENT-STORY-PAIR
S800
DETERMINE STOPWORDS
S900
DETERMINE TERMS
S1000
DETERMINE INCREMENTAL SOURCE-IDENTIFIED TF-INVERSE STORY FREQ MODELS BASED ON TERMS
S1100
DETERMINE TF-INVERSE EVENT FREQUENCY MODEL BASED ON TERMS
S1200
DETERMINE UNADJUSTED SIMILARITY METRICS
S1300
DETERMINE AVERAGE STORY SIMILARITY ADJUSTMENTS
S1400
DETERMINE EVENT SIMILARITY ADJUSTMENT BASED ON EVENT AND SOURCE-PAIR INFORMATION
S1500
DETERMINE TERM WEIGHTS BASED ON INVERSE STORY AND INVERSE EVENT FREQUENCY
S1600
DETERMINE ADJUSTED SIMILARITY SCORE BASED ON INTER-STORY SIMILARITY METRIC, AVERAGE STORY SIMILARITY, EVENT ADJUSTMENTS AND SEGMENTATION
S1700
ADDITIONAL STORIES IN CORPUS?
S1800
YES
NO
DETERMINE NEW EVENT SCORE FOR NEW STORY BASED ON THE ADJUSTED SIMILARITY SCORE
S2000
DETERMINE NEW EVENT BASED ON NEW EVENT SCORE AND OPTIONAL THRESHOLD
S2100
S1900
DETERMINE NEXT CORPUS-STORY, SET CURRENT CORPUS STORY TO NEXT CORPUS STORY
END OF SESSION REQUESTED?
S2200
NO
YES
S2300
DETERMINE NEXT NEW-STORY
S2400
END

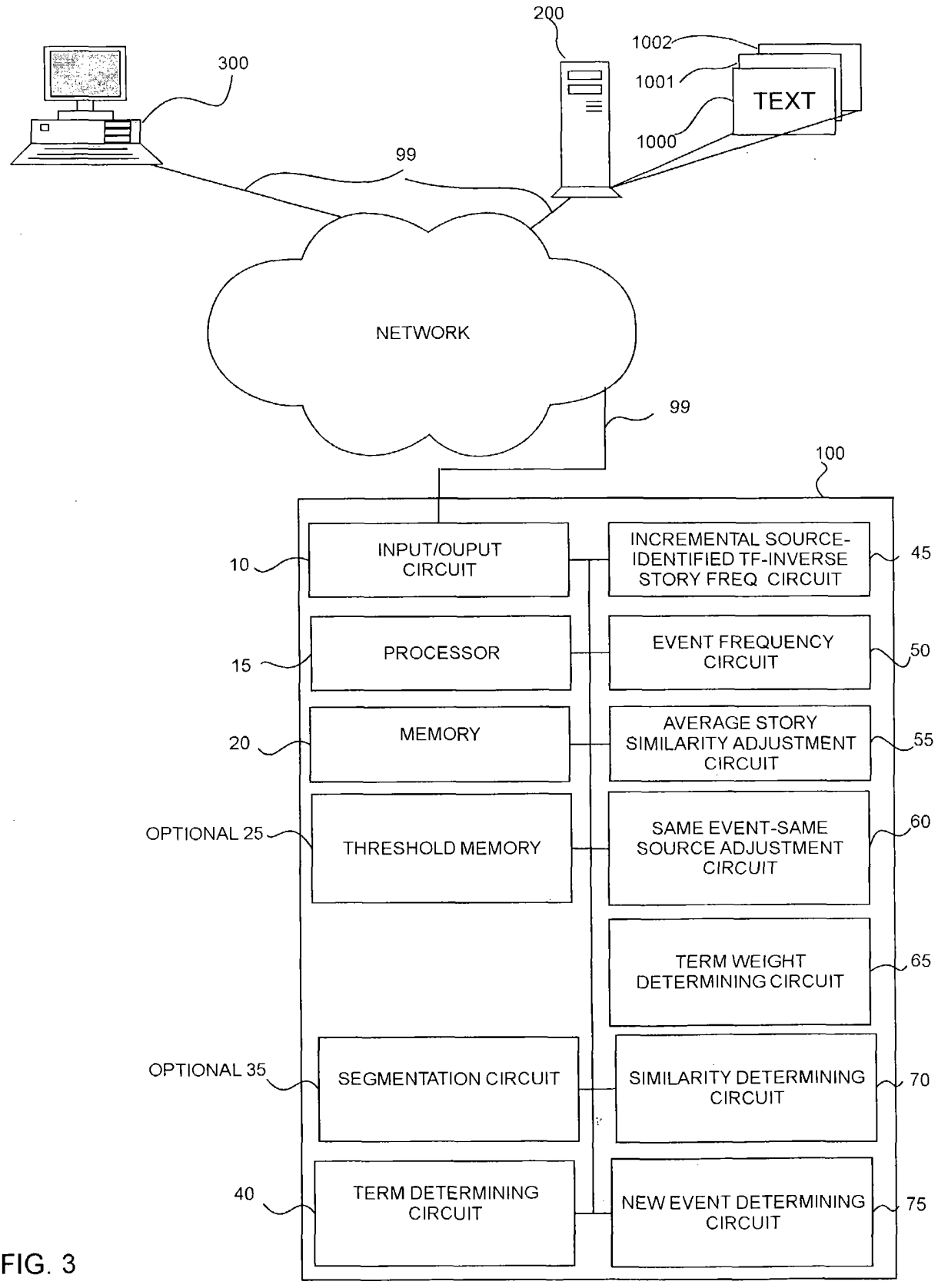

200
1002
1001
1000
TEXT
300
99
NETWORK
99
100
10
INPUT/OUPUT CIRCUIT
INCREMENTAL SOURCE-IDENTIFIED TF-INVERSE STORY FREQ CIRCUIT
45
15
PROCESSOR
EVENT FREQUENCY CIRCUIT
50
20
MEMORY
AVERAGE STORY SIMILARITY ADJUSTMENT CIRCUIT
55
OPTIONAL 25
THRESHOLD MEMORY
SAME EVENT-SAME SOURCE ADJUSTMENT CIRCUIT
60
TERM WEIGHT DETERMINING CIRCUIT
65
OPTIONAL 35
SEGMENTATION CIRCUIT
SIMILARITY DETERMINING CIRCUIT
70
40
TERM DETERMINING CIRCUIT
NEW EVENT DETERMINING CIRCUIT
75

FIG. 3

STORY1 ID	STORY2 ID	SIMILARITY-METRIC	AVERAGE-STORY-SIMILARITY-ADJUSTMENT	SAME EVENT-SAME SOURCE ADJUSTMENT
1000	1001	.34	.033	.031
.	.	.	.	.
	.	.	.	.
.	.	.	.	.
1001	1002	.25	.024	.023

710 720 730 740 750

700

Fig. 4

STORY1 ID	STORY2 ID	HELLINGER-SIMILARITY METRIC	AVERAGE-STORY-SIMILARITY ADJUSTMENT-HELLINGER	SAME EVENT-SAME SOURCE ADJUSTMENT-HELLINGER	...	...	COSINE-DISTANCE-SIMILARITY - METRIC	AVERAGE-STORY-SIMILARITY ADJUSTMENT-COSINE-DISTANCE-	SAME EVENT-SAME SOURCE ADJUSTMENT-COSINE-DISTANCE-	...
1000	1001	.34	.033	.031	.	.	.33	.032	.030	.
.	.	.	.	.	.	.	.	.		.
.	.	.	.	.	.	.	.	.		.
.	.	.	.	.	.	.	.	.		.
1001	1002	.25	.024	.023	.	.	.24	.023	.022	.

710 720 731 741 751 732 742 752

Fig. 5

800

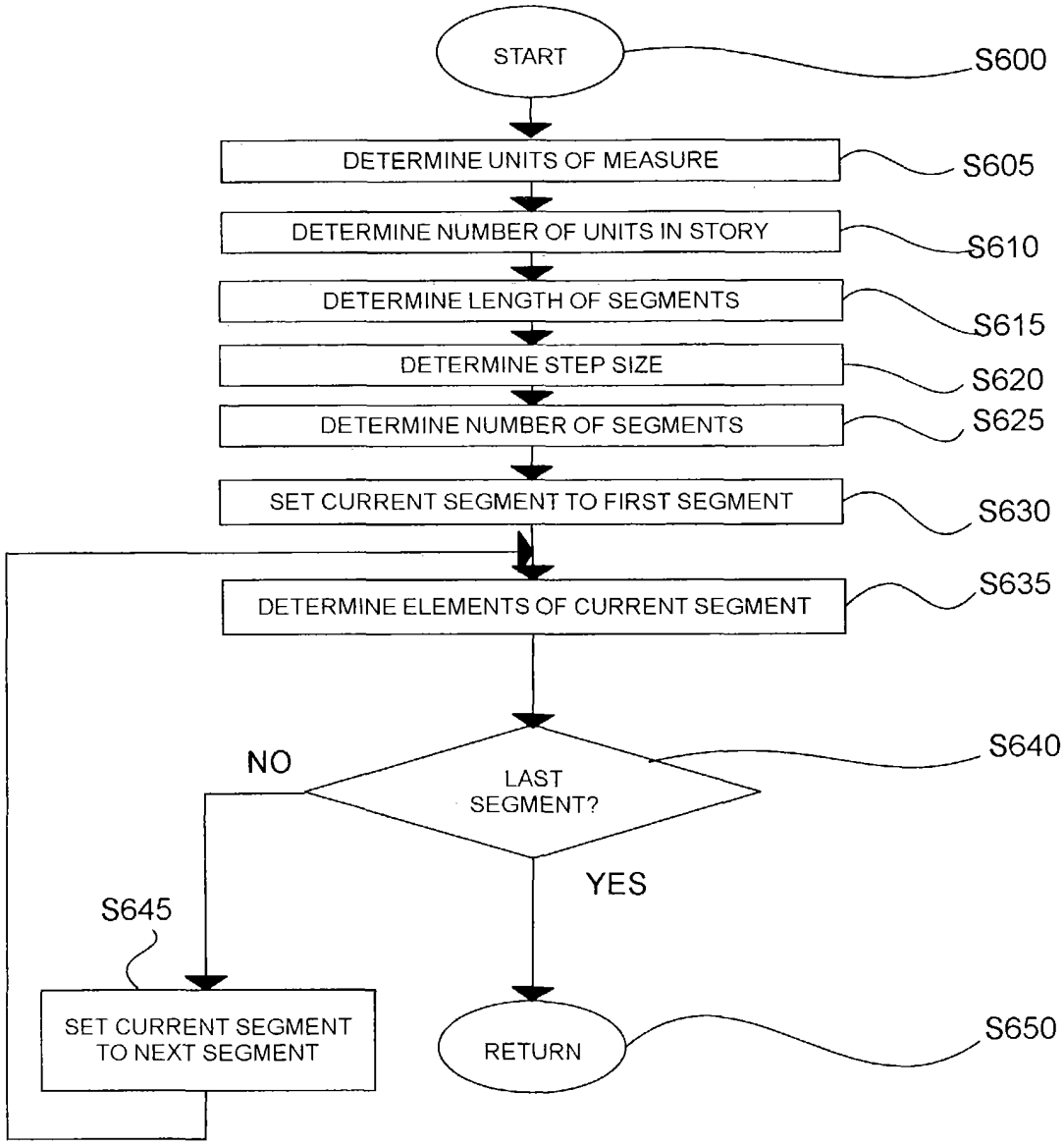

START
S600
DETERMINE UNITS OF MEASURE
S605
DETERMINE NUMBER OF UNITS IN STORY
S610
DETERMINE LENGTH OF SEGMENTS
S615
DETERMINE STEP SIZE
S620
DETERMINE NUMBER OF SEGMENTS
S625
SET CURRENT SEGMENT TO FIRST SEGMENT
S630
DETERMINE ELEMENTS OF CURRENT SEGMENT
S635
LAST SEGMENT?
S640
NO
YES
S645
SET CURRENT SEGMENT TO NEXT SEGMENT
RETURN
S650

FIG. 6

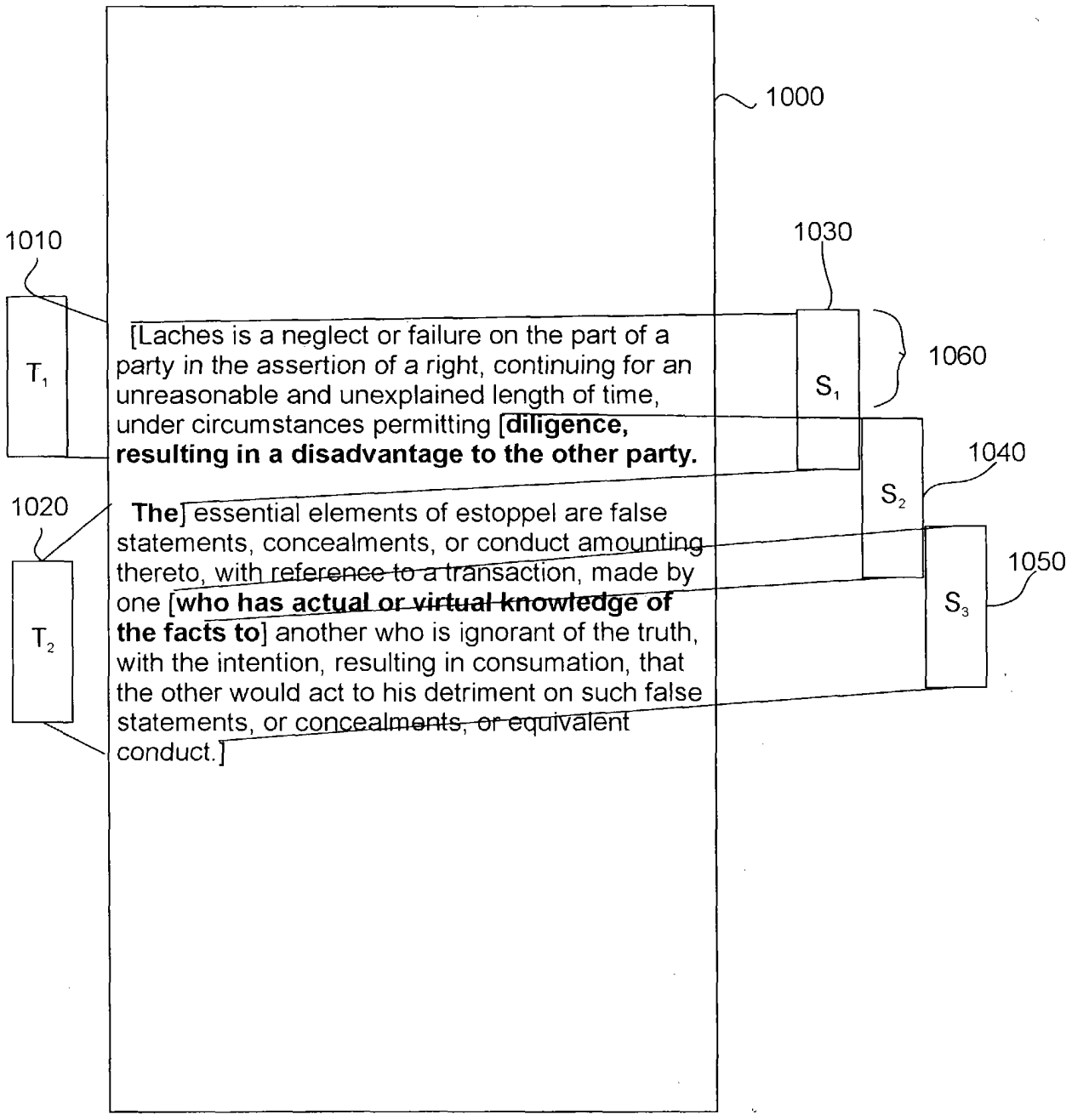

1000
1010
1030
T_1
[Laches is a neglect or failure on the part of a party in the assertion of a right, continuing for an unreasonable and unexplained length of time, under circumstances permitting [**diligence, resulting in a disadvantage to the other party.**
S_1
1060
1040
S_2
1020
The] essential elements of estoppel are false statements, concealments, or conduct amounting thereto, with reference to a transaction, made by one [**who has actual or virtual knowledge of the facts to**] another who is ignorant of the truth, with the intention, resulting in consumation, that the other would act to his detriment on such false statements, or concealments, or equivalent conduct.]
T_2
1050
S_3

FIG. 7

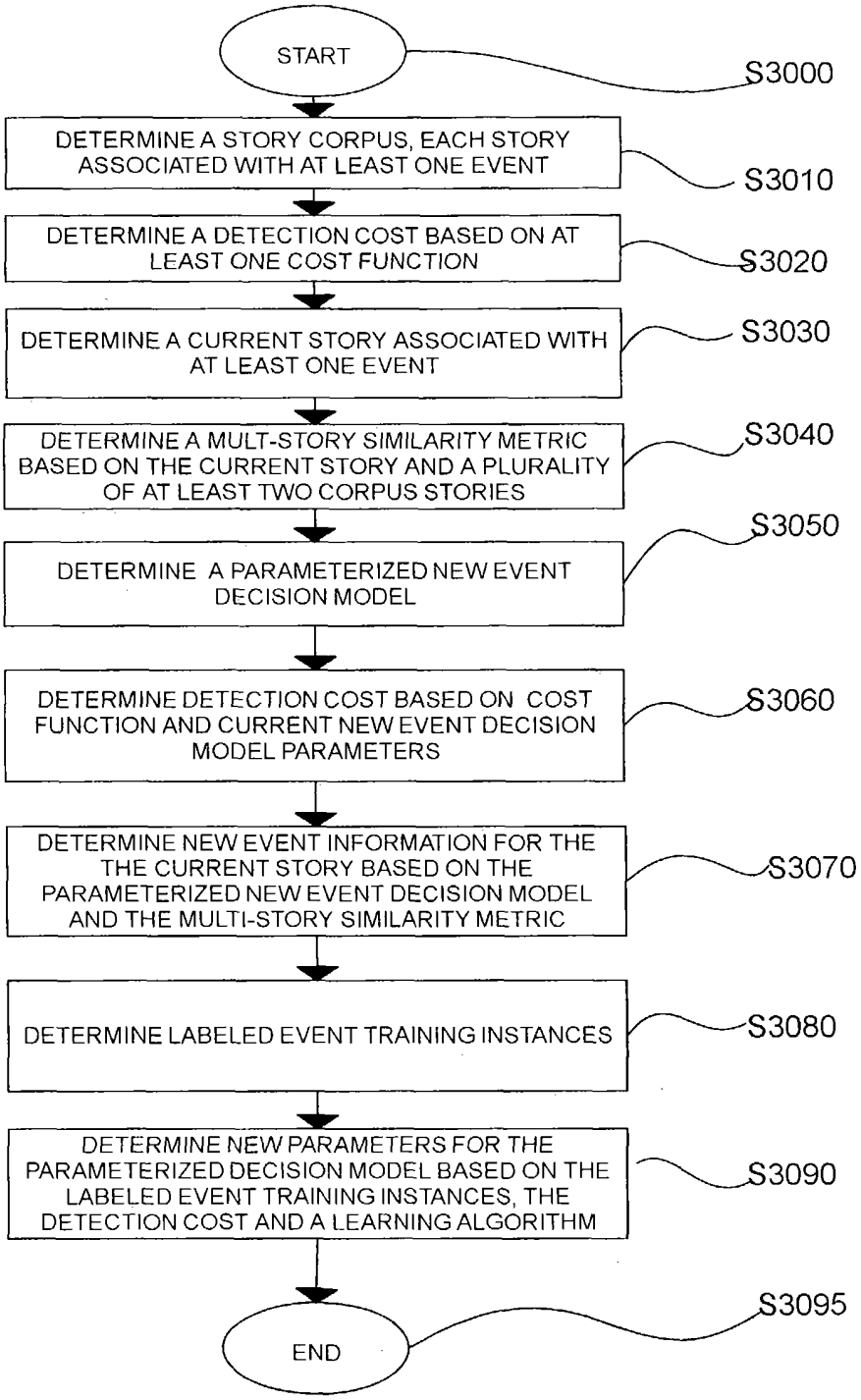

START
S3000
DETERMINE A STORY CORPUS, EACH STORY ASSOCIATED WITH AT LEAST ONE EVENT
S3010
DETERMINE A DETECTION COST BASED ON AT LEAST ONE COST FUNCTION
S3020
DETERMINE A CURRENT STORY ASSOCIATED WITH AT LEAST ONE EVENT
S3030
DETERMINE A MULT-STORY SIMILARITY METRIC BASED ON THE CURRENT STORY AND A PLURALITY OF AT LEAST TWO CORPUS STORIES
S3040
DETERMINE A PARAMETERIZED NEW EVENT DECISION MODEL
S3050
DETERMINE DETECTION COST BASED ON COST FUNCTION AND CURRENT NEW EVENT DECISION MODEL PARAMETERS
S3060
DETERMINE NEW EVENT INFORMATION FOR THE THE CURRENT STORY BASED ON THE PARAMETERIZED NEW EVENT DECISION MODEL AND THE MULTI-STORY SIMILARITY METRIC
S3070
DETERMINE LABELED EVENT TRAINING INSTANCES
S3080
DETERMINE NEW PARAMETERS FOR THE PARAMETERIZED DECISION MODEL BASED ON THE LABELED EVENT TRAINING INSTANCES, THE DETECTION COST AND A LEARNING ALGORITHM
S3090
END
S3095

FIG. 8